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10/632,883	07/31/2003	**Jason M. Quintana**	200209501-1	3047

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EXAMINER	
NGUYEN, ALLEN H	
ART UNIT	**PAPER NUMBER**
2625	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/632,883	QUINTANA ET AL.	
	Examiner	Art Unit	
	ALLEN H. NGUYEN	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 February 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-14,16-20 and 24-30* is/are pending in the application.

4a) Of the above claim(s) *21,22 and 31* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-14,16-20 and 24-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 21-22, 31 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 02/04/2008.

Response to Arguments

2. Applicant's arguments with respect to claims 10-14, 16-20, 24-30 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 10, 13-14, 16, 18, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perego et al. (US 6,826,663) in view of Mitra et al. (US 6,167,472), and further in view of Easwar et al. (US 5,933,588).

Regarding claim 18, Perego '663 discloses a system (100, fig. 1) for transferring print data to a device (103, fig. 1), comprising:

a controller configured to use a predefined mask (i.e., the memory controller selects a mask key from a table of predetermined mask keys; see col. 17, lines 38-40) to select a first portion of print data disposed in a first pattern and to remove a second portion of the print data disposed in a second pattern that is complementary to the first pattern (i.e., each of the discrete memory devices within the storage subsystem includes the table of predetermined values and uses the selector value to select the selector-specified key value. The selected key value is then used to identify masked data values so that they are excluded from storage; Col. 4, lines 57-62) so that the print data is compressed (i.e., the selector value may be significantly smaller than a key value, additional bandwidth savings are achieved; Col. 4, lines 63-65);

Perego '663 does not explicitly show a printing device including a copy of the mask stored in memory and being configured to receive intermediate data corresponding to the compressed print data, to expand the intermediate data using the copy of the mask.

However, the above-mentioned claimed limitations are well known in the art as evidenced by Mitra '472. In particular, Mitra '472 teaches a printing device (PCI Peripheral 300, fig. 8) including a copy of the mask stored in memory and being configured to receive intermediate data corresponding to the compressed print data (i.e., the new data value is equal to the bit-wise exclusive-OR of the new configuration information value and the corresponding mask. The software

uses standard PCI-defined data transfer mechanisms to write the new data value into the memory location; Col. 9, lines 40-45), to expand (Decode Command 706, fig. 7) the intermediate data using the copy of the mask (i.e., proceeds to produce a masked value that is equal to a bit-wise exclusive-OR of an actual data value obtained from the programmable non-volatile memory and a corresponding mask from a hard-coded logic in order to produce the masked value in step 710; Col. 8, lines 35-40, fig. 7).

In view of the above, having the system of Perego and then given the well-established teaching of Mitra, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Perego as taught by Mitra to include: a printing device including a copy of the mask stored in memory and being configured to receive intermediate data corresponding to the compressed print data, to expand the intermediate data using the copy of the mask, since Mitra stated in col. 4, lines 5-10 that such a modification would ensure a PCI peripheral device in accordance with the present invention includes both hard-coded logic and a programmable non-volatile memory. Each memory location in the programmable non-volatile memory is associated with a corresponding mask stored in the hard-coded logic.

The combination of Perego '663 and Mitra '472 does not explicitly show printing at least a subset of the expanded intermediate data.

However, the above-mentioned claimed limitation is well known in the art as evidenced by Easwar '588. In particular, Easwar '588 teaches printing at least a subset of the expanded intermediate data (i.e., the composite mask is then

expanded, such that mask values representing pixels to be printed; Col. 1, lines 50-60).

In view of the above, having the combination system of Perego and Mitra and then given the well-established teaching of Easwar, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Perego and Mitra as taught by Easwar to include: To print at least a subset of the expanded intermediate data, since Easwar stated in col. 1, lines 25+ that such a modification would ensure printers typically use some sort of processor to interpret a program representing the image to be printed.

Regarding claim 20, the combination of Perego '663 and Mitra '472 does not explicitly show the system, wherein the printing device is configured to expand the intermediate data by inserting data elements into the intermediate data based on the second pattern.

However, the above-mentioned claimed limitation is well known in the art as evidenced by Easwar '588. In particular, Easwar '588 teaches the system (fig. 3), wherein the printing device (a printer system, fig. 1) is configured to expand the intermediate data by inserting data elements into the intermediate data based on the second pattern (i.e., the replicated and aligned pattern mask is combined with the character mask, thereby providing a composite mask. The composite mask is then expanded, such that mask values representing pixels to be printed; Col. 1, lines 55-60, fig. 3).

In view of the above, having the combination system of Perego and Mitra and then given the well-established teaching of Easwar, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Perego and Mitra as taught by Easwar to include: the system, wherein the printing device is configured to expand the intermediate data by inserting data elements into the intermediate data based on the second pattern, since Easwar stated in col. 1, lines 25+ that such a modification would ensure printers typically use some sort of processor to interpret a program representing the image to be printed.

Regarding claims 10, 14, claims 10, 14 are the method claims of device claims 18, 20, respectively. Therefore, method claims 10, 14 are rejected for the reason given in device claims 18, 20.

Regarding claim 13, Perego '663 discloses the method, wherein applying (i.e., the key generator operates to generate a mask key that does not match any unmasked bytes within an incoming write data block; Col. 10, lines 25-27), removing (i.e., the group of unmasked bytes that potentially match the mask key is referred to herein as the match pool and is initially established at 311 by removing all masked bytes from the write data block; Col. 10, lines 32-35, fig. 8), and sending are conducted a number of times on the print data to produce a corresponding number of interlaced patterns of printed output (i.e., from the

match pool in each iteration of operations 315-323, after seven iterations, a pattern guaranteed to be unique; Col. 11, lines 42-45, fig. 8).

Regarding claim 16, Perego '663 does not explicitly show the method, wherein the printing device expands the intermediate data by disposing the intermediate data in a pattern, the pattern being defined by the copy of the mask.

However, the above-mentioned claimed limitations are well known in the art as evidenced by Mitra '472. In particular, Mitra '472 teaches the method, wherein the printing device expands the intermediate data by disposing the intermediate data in a pattern (i.e., the method decodes the command in step 706; Fig. 7), the pattern being defined by the copy of the mask (i.e., the method proceeds to produce a masked value that is equal to a bit-wise exclusive-OR of an actual data value obtained from the programmable non-volatile memory and a corresponding mask from a hard-coded logic; Col. 8, lines 37-40, fig. 7).

In view of the above, having the system of Perego and then given the well-established teaching of Mitra, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Perego as taught by Mitra to include: The method, wherein the printing device expands the intermediate data by disposing the intermediate data in a pattern, the pattern being defined by the copy of the mask, since Mitra stated in col. 4, lines 5-10 that such a modification would ensure a PCI peripheral device in accordance with the present invention includes both hard-coded logic and a programmable non-volatile memory. Each memory location in the programmable

non-volatile memory is associated with a corresponding mask stored in the hard-coded logic.

5. Claims 11-12, 17, 19, 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perego et al. (US 6,826,663) in view of Mitra et al. (US 6,167,472), in view of Easwar et al. (US 5,933,588), and further in view of Moriyama et al. (US 6,646,756).

Regarding claim 11, the combination of Perego '663 and Mitra '472 and Easwar '588 does not explicitly show the method, wherein the printing device has a print-head with an array of nozzles, wherein applying the mask further specifies a remaining valid portion that defines a firing arrangement for a subset of the nozzles, and wherein the printing device prints the subset of the expanded intermediate data by ejecting ink droplets from the array of nozzles onto the print media according to the firing arrangement.

However, the above-mentioned claimed limitations are well known in the art as evidenced by Moriyama '472. In particular, Moriyama '472 teaches the method, wherein the printing device (400, fig. 1) has a print-head with an array of nozzles (i.e., the printing head 102 corresponds to individually all of the nozzles for heating; Col. 5, lines 43-45, fig. 1), wherein applying the mask (fig. 6B) further specifies a remaining valid portion (1, fig. 6B) that defines a firing arrangement for a subset of the nozzles (Figs. 2-4), and wherein the printing device prints the subset of the expanded intermediate data (1, fig. 6C) by ejecting ink droplets

from the array of nozzles onto the print media according to the firing arrangement (a block point shows a printing dot of ink droplet, fig. 5).

In view of the above, having the combination system of Perego and Mitra and Easwar and then given the well-established teaching of Moriyama, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Perego and Mitra and Easwar as taught by Moriyama to include: the method, wherein the printing device has a print-head with an array of nozzles, wherein applying the mask further specifies a remaining valid portion that defines a firing arrangement for a subset of the nozzles, and wherein the printing device prints the subset of the expanded intermediate data by ejecting ink droplets from the array of nozzles onto the print media according to the firing arrangement, since Moriyama stated in col. 1, lines 15-20 that such a modification would ensure a printing apparatus and a printing method in which ink dot adheres to the printing medium to form a character or an image, and especially relates to an ink-jet printing apparatus and an ink-jet printing method equipped with a plurality of printing modes according to different printing quality.

Regarding claim 12, Perego '663 discloses the method, wherein the data elements of the print data have values (i.e., the mask word are set, such as a logic `1` value, indicating that the corresponding write data values are masked data values; Col. 5, lines 38-40), the method further comprising changing the values of at. least a subset of the valid portion before sending (i.e., the mask key

158 is substituted for the masked data values to generate the coded data block 162. At 159, the coded data block and mask key are transmitted to the storage subsystem; Col. 5, lines 40-43, fig. 2).

Regarding claim 17, the combination of Perego '663 and Mitra '472 and Easwar '588 does not explicitly show the method , wherein removing provides a first compression, the method further comprising performing a second compression of the compressed print data before sending.

However, the above-mentioned claimed limitations are well known in the art as evidenced by Moriyama '472. In particular, Moriyama '472 teaches the method, wherein removing provides a first compression (i.e., one time data compression rate; Col. 11, line 1, fig. 6A), the method further comprising performing a second compression of the compressed print data before sending (i.e., twice data compression rate; Col. 11, line 2, fig. 6B).

In view of the above, having the combination system of Perego and Mitra and Easwar and then given the well-established teaching of Moriyama, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Perego and Mitra and Easwar as taught by Moriyama to include: The method, wherein removing provides a first compression, the method further comprising performing a second compression of the compressed print data before sending, since Moriyama stated in col. 1, lines 54+ that such a modification would propose high printing quality by improving printing resolution.

Regarding claim 19, the combination of Perego '663 and Mitra '472 and Easwar '588 does not explicitly show the system, wherein the printing device is an inkjet printing device.

However, the above-mentioned claimed limitation is well known in the art as evidenced by Moriyama '756. In particular, Moriyama '756 teaches the system (fig. 1), wherein the printing device is an inkjet printing device (400, fig. 1).

In view of the above, having the combination system of Perego and Mitra and Easwar and then given the well-established teaching of Moriyama, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Perego and Mitra and Easwar as taught by Moriyama to include: the system, wherein the printing device is an inkjet printing device, since Moriyama stated in col. 1, lines 15-20 that such a modification would ensure a printing apparatus and a printing method in which ink dot adheres to the printing medium to form a character or an image, and especially relates to an ink-jet printing apparatus and an ink-jet printing method equipped with a plurality of printing modes according to different printing quality.

Regarding claim 29, Perego '663 does not explicitly show the method, wherein the printing device expands the intermediate data using a copy of the mask stored in non-volatile memory of the printing device.

However, the above-mentioned claimed limitation is well known in the art as evidenced by Mitra '472. In particular, Mitra '472 teaches the method, wherein the printing device (112, fig. 1) expands the intermediate data (the Decoding Logic 502 decodes the command received on the data signal 420, col. 7, lines 5-7, fig. 5) using a copy of the mask stored in non-volatile memory of the printing device (i.e., the method proceeds to produce a masked value that is equal to a bit-wise exclusive-OR of an actual data value obtained from the programmable non-volatile memory and a corresponding mask from a hard-coded logic; Col. 8, lines 35-40).

In view of the above, having the system of Perego and then given the well-established teaching of Mitra, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Perego as taught by Mitra to include: The method, wherein the printing device expands the intermediate data using a copy of the mask stored in non-volatile memory of the printing device, since Mitra stated in col. 4, lines 5-10 that such a modification would ensure a PCI peripheral device in accordance with the present invention includes both hard-coded logic and a programmable non-volatile memory. Each memory location in the programmable non-volatile memory is associated with a corresponding mask stored in the hard-coded logic.

Regarding claim 30, Perego '663 does not explicitly show the system, wherein the printing device includes a copy of the mask stored in non-volatile memory.

However, the above-mentioned claimed limitation is well known in the art as evidenced by Mitra '472. In particular, Mitra '472 teaches the system, wherein the printing device includes a copy of the mask stored in non-volatile memory (i.e., the method proceeds to produce a masked value that is equal to a bit-wise exclusive-OR of an actual data value obtained from the programmable non-volatile memory and a corresponding mask from a hard-coded logic; Col. 8, lines 35-40).

In view of the above, having the system of Perego and then given the well-established teaching of Mitra, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Perego as taught by Mitra to include: The system, wherein the printing device includes a copy of the mask stored in non-volatile memory, since Mitra stated in col. 4, lines 5-10 that such a modification would ensure a PCI peripheral device in accordance with the present invention includes both hard-coded logic and a programmable non-volatile memory. Each memory location in the programmable non-volatile memory is associated with a corresponding mask stored in the hard-coded logic.

6. Claims 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe (US 6,543,039), in view of Moriyama et al. (US 6,646,756).

Regarding claim 24, Watanabe '039 discloses a method of transmitting data to a printing device (53, fig. 16), comprising:

providing a first array of M X N print data elements (i.e., a first step of

sequentially reading design cell data about design cells among pieces of integrated circuit design layout data stored in storage section; Col. 3, lines 35-40, fig. 13) to a controller (Processing Control Section 25, fig. 2);

applying a predefined mask at the controller (i.e., the computer capable of processing the data starts up a job of predetermined mask data processing; Col. 10, lines 23-25) to the first array so as to create a second array of M X N print data elements (i.e., a second step of restoring a non-overlapped array data region left by excluding a data region having overlapped data from an array data read in the first step; Col. 3, lines 40-45), the second array including a valid portion and an invalid portion (i.e., file created based on the structures of the reference array data and the overlapped data, fig. 14);

Watanabe '039 does not explicitly show transmitting the valid portion selectively to a printing device that includes a copy of the predefined mask stored in memory of the printing device,

wherein the printing device uses the copy of the predefined mask to convert the valid portion into a third array of M X N print data elements, and wherein the printing device generates printed output according to the third array of print data elements.

However, the above-mentioned claimed limitations are well known in the art as evidenced by Moriyama '756. In particular, Moriyama '756 teaches transmitting the valid portion selectively to a printing device (i.e., the data only for printing at next scanning is selected among the developed data by using a mask dividing the developed data into the data for printing; Col. 11, lines 10-15) that

includes a copy of the predefined mask stored in memory of the printing device (i.e., the selected printing data for printing at next scanning according to all nozzles is developed in the memory part 411 of the data head controlling part 410; Col. 11, lines 15-20, fig. 1),

wherein the printing device (400, fig. 1) uses the copy of the predefined mask (1, fig. 6B) to convert the valid portion into a third array of M X N print data elements (2, fig. 6B), and wherein the printing device generates printed output according to the third array of print data elements (2 Bits, fig. 6B).

In view of the above, having the system of Watanabe and then given the well-established teaching of Moriyama, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Watanabe as taught by Moriyama to include: Transmitting the valid portion selectively to a printing device that includes a copy of the predefined mask stored in memory of the printing device, wherein the printing device uses the copy of the predefined mask to convert the valid portion into a third array of M X N print data elements, and wherein the printing device generates printed output according to the third array of print data elements, since Moriyama stated in col. 2, lines 15+ that such a modification would ensure in the multi-pass printing method performing printing by thinning dot for printing to complementarily print at several scannings, as above, the waiting state of the printing head generates the fluctuation in printing density to deteriorate printing quality.

Regarding claim 25, Watanabe '039 does not explicitly show the method, wherein the third array of print data elements describes a firing pattern for an M x N array of ink nozzles in the printing device.

However, the above-mentioned claimed limitation is well known in the art as evidenced by Moriyama '756. In particular, Moriyama '756 teaches the method, wherein the third array (2, fig. 6B) of print data elements (2 Bits of 2, fig. 6B) describes a firing pattern for an M x N array of ink nozzles in the printing device (i.e., printing process at third scanning is performed by using 4 nozzles at the upper side of the printing head 102 to finish printing process according to printing area D; Col. 8, lines 2-5, fig. 4).

In view of the above, having the system of Watanabe and then given the well-established teaching of Moriyama, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Watanabe as taught by Moriyama to include: The method, wherein the third array of print data elements describes a firing pattern for an M x N array of ink nozzles in the printing device, since Moriyama stated in col. 2, lines 15+ that such a modification would ensure in the multi-pass printing method performing printing by thinning dot for printing to complementarily print at several scannings, as above, the waiting state of the printing head generates the fluctuation in printing density to deteriorate printing quality.

Regarding claim 26, Watanabe '039 does not explicitly show the method, wherein the printing devices retains the copy of the predefined mask in non-volatile memory local to the printing device.

However, the above-mentioned claimed limitation is well known in the art as evidenced by Moriyama '756. In particular, Moriyama '756 teaches the method, wherein the printing devices retains the copy of the predefined mask in non-volatile memory local to the printing device (i.e., the memorizing medium for supplying the program code such as a nonvolatile memory card, a ROM, and the like can be used; Col. 16, lines 13-16).

In view of the above, having the system of Watanabe and then given the well-established teaching of Moriyama, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Watanabe as taught by Moriyama to include: The method, wherein the printing devices retains the copy of the predefined mask in non-volatile memory local to the printing device, since such a modification would ensure nonvolatile memories being readable and writable on-board, are employed so that the rewrite program can be updated without replacing the ROM by a new one when addition of functions or version-up of an application program will be necessary in future.

Regarding claim 27, Watanabe '039 does not explicitly show the method, wherein the valid portion is compressed prior to transmission to the printing device.

However, the above-mentioned claimed limitation is well known in the art as evidenced by Moriyama '756. In particular, Moriyama '756 teaches the method, wherein the valid portion is compressed prior to transmission to the

printing device (i.e., 9 bits are compressed into 3 bits. Since data compression rate is three times, data transmission time can be one third; Col. 10, lines 14-16, fig. 5C).

In view of the above, having the system of Watanabe and then given the well-established teaching of Moriyama, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the system of Watanabe as taught by Moriyama to include: The method, wherein the valid portion is compressed prior to transmission to the printing device, since Moriyama stated in col. 1, lines 60+ that such a modification would ensure this method performs processes in which a host computer compresses data for transferring and the compressed data is transferred from the host computer to a printing apparatus and then the compressed data is developed.

Regarding claim 28, Watanabe '039 discloses the method, wherein M is equal to N (i.e., the reference array data is defined as the 6-rows X 6-columns secondary array; Col. 12, line 43, fig. 13).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Otsuki (US 2003/0025751) discloses printing with varied types of ink dots.

La Joie et al. (US 5,630,048) discloses diagnostic system for run-time monitoring of computer operations.

Kawamura et al. (US 6,940,975) discloses encryption/decryption apparatus, encryption/decryption method, and program storage medium therefor.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALLEN H. NGUYEN whose telephone number is (571)270-1229. The examiner can normally be reached on M-F from 9:00 AM-6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on (571)-272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/King Y. Poon/
Supervisory Patent Examiner, Art Unit 2625

/A. H. N./
Examiner, Art Unit 2625

04/25/2008